

## **FACULTY ACHIEVEMENTS**

### **PUBLICATIONS**

- ❖ Leena Mary and Deekshitha G. published "Multilingual Broad Phoneme Recognition and Language-independent Spoken Term Detection for Low-resourced Languages", in Journal of King Saud University Computer and Information - Sciences, Elsevier (SCIE), 2021.
- ❖ Leena Mary & Sreehari R published "Automatic Short Utterance Speaker Recognition using Stationary Wavelet Coefficients of Pitch Synchronized LP Residual", in the International Journal of Speech Technology, Springer (SCOPUS Indexed), Sep. 2021.
- ❖ Leena Mary, Devi Krishna and Anu George published, "Automatic Severity Evaluation of Articulation Disorder in Speech using Dynamic Time Warping", at the Fourth International Conference on Microelectronics, Signals and Systems ICMSS 2021, Kollam, Kerala, Nov 2021.
- ❖ Leena Mary, Anu George and Greeshma Unnikrishnan published, "Non-uniform Region Based Features for Automatic Language Identification" at the Fourth International Conference on Microelectronics, Signals and Systems ICMSS 2021, Kollam, Kerala, Nov 2021.
- ❖ Renu Jose, N. A. Mathew, and K. S. Riyas published "Comparison of Machine Learning Algorithms For Heart Rate Variability Based Driver Drowsiness Detection" at 2nd Global Conference for Advancement in Technology (GCAT), 2021.
- ❖ Renu Jose and V. Vijayan published, "Performance Analysis of Modulation Classification Using Machine Learning," at the 8th International Conference on Smart Computing and Communications (ICSCC), 2021.
- ❖ Manju Manuel and Deepa Abraham published, "Design of Transmultiplexer Filter Banks Using Ramanujan Sums" in Natl. Acad. Sci. Lett. 44, 33-38 (2021).
- ❖ Manju Manuel and D. Abraham published, "Implementation of Sparse Ramanujan Sequence (SRS) based transforms in FPGA," at the International Conference on Communication, Control and Information Sciences (ICCISC), 2021

- ❖ Manju Manuel and Devis Tomson published, "Hardware-efficient auto-reconfigurable hearing aids using 3-level octave interpolated filters for auditory compensation applications." in Physical and Engineering Sciences in Medicine.
- ❖ Dr. Leena Mary was awarded "Outstanding Researcher 2021" by IEEE Kerala Section. Being phenomenal in her contributions to IEEE and the Research Community, she has always stood as the bar of excellence in influencing budding engineers.

## **SPONSERD PROJECTS**

- ❖ Dr. Leena Mary was the Principal Investigator of the project "Modifying the design of automated Malayalam Articulation Test to improve accuracy for evaluation of children with severe articulatory disorders" funded by All India Institute of Speech and Hearing (AIISH), Mysore Jan 2022-23, Rs. 5,80,000/-.
- ❖ Dr. Renu Jose pursued a KTU CERD Funded research seed money project "Machine Learning based Channel Equalization in Digital Communication Systems" with funding of Ps 2,00,000/
- ❖ Dr. Michael George received the KTU CERD Funding to the tune of Rs. 2,00,000/- as part of the Research Seed Money Project on "An automated video surveillance system using Deep Learning". The funding has been spent on acquiring a deep learning capable workstation.
- ❖ Dr. Upama Rajan received TEQIP seed money of Rs. 2,00,000/- for the project "Multi packet reception for WLAN".
- ❖ Dr. Upama Rajan received CERD Funding for the final year project " IoT based smart irrigation system", Rs. 22,000/-.

## **TALK SESSIONS**

- ❖ Dr. Leena Mary was invited to talk in the inaugural ceremony of FDP titled "Hands on Training on Latex Documentation Tool " organised by SCT Thiruvananthapuram during 24-25th, Sep 2021.
- ❖ Dr. Leena Mary was invited to talk at Mangalam College of Engineering on the topic "Relevance of Research in Teaching" on 18th August 2021.

- ❖ Dr. Leena Mary was invited to talk on "Career resilience for Women Engineers" at IEEE All Kerala Industrial Application Society Conclave on May 8th, 2022.
- ❖ Dr. Leena Mary was invited as the chief guest in the closing ceremony of Women In Power Summit 2021 organized by IEEE SB College Of Engineering Karunagappally on 28th Nov '21.
- ❖ Dr. Arun Varghese was invited to handle a session on "Numpy" for KTU sponsored FDP on Machine Learning organized by College of Engg. Attingal, on 2nd Sept 2021.
- ❖ Dr. Arun Varghese conducted a 3-day workshop on "DSP lab with 6713 DSK", for KTU faculty, on 24-26th Nov 2021
- ❖ Dr. Arun Vargese was invited to handle two sessions Framework on "Deep Learning Pytorch and "Deep-Learning for Computer Vision" for DTE sponsored FDP on 3rd and 4th Feb 2022
- ❖ Dr. Arun Varghese was invited to handle a session on "Data wrangling with Python for AICTE sponsored online refresher programme on Medical Data Analytics organized by Dept of Computer Applications, Anna University, on 6th Jan 2022.
- ❖ Dr. Michael George was invited as the resource person in the FDP on "Machine Learning for Engineering Applications" organized by CET during 20th- 22nd Dec 21.
- ❖ Dr. Michael George was invited as the resource person in the FDP on "Deep learning for Computer Vision organized by the Department of Electronics and Communication Engineering, R.I.T. Kottayam, during 31st Jan- 5th Feb 22.
- ❖ Dr. Renu Jose was invited to handle a session as the resource person in the training program on "Machine Learning for Engineering Applications" from 20-22nd Dec'21 organized by College of Engineering, Trivandrum.
- ❖ Dr. Renu Jose was invited to handle a session as the resource person in the APJ AKTU Sponsored FDP on "AI and Data Science A Pedagogical Approach" from 9th to 13th August, 2021 organized by SJCET Palai
- ❖ Dr. Renu Jose was invited to handle a session as the resource person in the training programme on "Deep learning for Computer Vision" organized by Department of Electronics and Communication Engineering, R.I.T. Kottayam., during 31st Jan- 5th Feb'22.

## **PhD**

- ❖ Prof. Michael George was awarded PhD in "Electronics and Communication Engineering" on July 26th, 2021 from CUSAT.
- ❖ Prof. Neetha George was awarded PhD in "Study and Investigations on Algorithms for segmentation of OCT images for Ophthalmic Applications" on Feb 2nd, 2022 from Kerala University.

## **FDPs COORDINATED**

- ❖ Dr. Arun Varghese & Dr. Michael George coordinated DTE sponsored FDP on "Embedded Systems Development" from 23rd to 25th February 2022.
- ❖ Dr. Helen Mary coordinated DTE sponsored FDP on "Deep learning for Computer Vision" organized by Department of Electronics & Communication Engineering, RIT, Kottayam, during 31st Jan to 5th Feb 2022.

## **STUDENT ACHIEVEMENTS**

### **PhD**

- ❖ Ms. Deekshitha G, defended her thesis on "Multistage Spoken Term Detection for Searching Speech Databases", in July 2021 under the supervision of Dr. Leena Mary, from A. P. J Abdul Kalam Technological University. She is currently pursuing her Post Doctoral Fellowship at Spire Lab, IISc Bangalore.
- ❖ Ms. Starlet Ben Alex, defended her thesis on "Multilevel Prosodic Features for Automatic Emotion and Speaker Recognition from Speech using Deep Learning Techniques", in Nov 2021 under the supervision of Dr. Leena Mary, from A. P. J Abdul Kalam Technological University.
- ❖ Mr. Tomson Devis, defended his thesis on "Auto-reconfigurable and Hardware-efficient Filter bank Structures for Auditory Compensation in Digital Hearing Aids", in Apr 2022 under the supervision of Dr. Manju Manuel, from A. P. J Abdul Kalam Technological University.

## **REVERTECH:**

### **GROWING BEYOND BOUNDARIES -An Ed-tech startup by Kallu S S of S8**

#### **ECE**

- ❖ The company was incorporated on 29 December 2020 as an ed-tech company with the intention of providing quality live training and internship at a low cost. After 6 months, the company set foot on developing software products and providing other services such as web and app development, web mining, digital marketing, machine learning to people.
  
- ❖ The milestones covered so far:
  - Internship and Training Taught 2000+ students different domains.
  - Workshops and Placements Conducted more than 150 workshops and accomplished 100+ placements.
  - Colleges Signed MoU with many colleges inside and outside Kerala to provide add on courses and training. Set up Community groups in 64 colleges.
  - Webinars Conducting free webinars every month on career guidance, newer technologies etc.
  - Partnered with more than 10 companies inside and outside India